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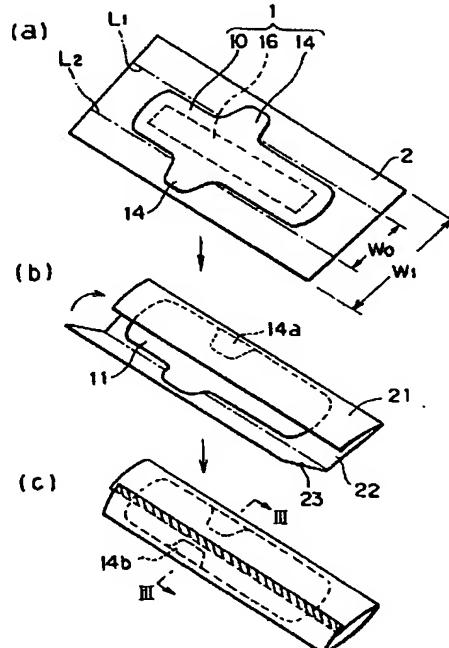
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(54)【発明の名称】 生理用ナプキンの包装構造および包装方法

(57)【要約】

【課題】 生理用ナプキンを高速で包装することのできる包装構造及び包装方法を提供する。

【解決手段】 透水性トップシート、不透水性パックシートおよび両シートの間に配設された吸収コアを備えたナプキン本体と、このナプキン本体のパックシート側に設けられた下着固定用の粘着剤層と、前記ナプキン本体の長手方向の左右の側縁から突設されると共に、下着に巻回して止着するための一対の係止片とからなる生理用ナプキンを、包装用シートで包装する生理用ナプキンの包装構造であって、生理用ナプキン1の一対の係止片14を、ナプキン本体10のトップシート11側に折り返し、包装用シート2を、その包装用シートの一対の側縁がトップシートおよび係止片の上面に位置するように、ナプキン本体のパックシート側からトップシート側に折り返し、包装用シートの折り返し部21、23同士を止着するように構成した包装構造である。



## 【特許請求の範囲】

【請求項1】 透水性トップシート、不透水性パックシートおよび両シートの間に配設された吸収コアを備えたナプキン本体と、このナプキン本体のパックシート側に設けられた下着固定用の粘着剤層と、前記ナプキン本体の長手方向の左右の側縁から突設されると共に、下着に巻回して止着するための一対の係止片とからなる生理用ナプキンを、生理用ナプキンよりも大きい包装用シートで包装する生理用ナプキンの包装構造であって、

前記生理用ナプキンの一対の係止片を、前記ナプキン本体のトップシート側に折り返し、

前記包装用シートを、その包装用シートの一対の側縁がトップシートおよび係止片の上面に位置するように、前記ナプキン本体のパックシート側からトップシート側に折り返し、

前記包装用シートの折り返し部同士を止着したことを特徴とする生理用ナプキンの包装構造。

【請求項2】 前記包装用シートの一対の側縁を重ね合わせ、この重なり合った部分を止着するものである請求項1に記載の生理用ナプキンの包装構造。

【請求項3】 前記包装用シートの折り返し部が対向するように、生理用ナプキンと包装用シートを幅方向中心線近傍で谷折りし、対向した前記折り返し部同士を止着するものである請求項1に記載の生理用ナプキンの包装構造。

【請求項4】 透水性トップシート、不透水性パックシートおよび両シートの間に配設された吸収コアを備えたナプキン本体と、このナプキン本体のパックシート側に設けられた下着固定用の粘着剤層と、前記ナプキン本体の長手方向の左右の側縁から突設されると共に、下着に巻回して止着するための一対の係止片とからなる生理用ナプキンを、生理用ナプキンよりも大きい包装用シートで包装する生理用ナプキンの包装構造であって、

前記包装用シート上に、前記生理用ナプキンを前記粘着剤層が包装用シート面に当接するように載置し、

前記生理用ナプキンの長手方向両端部を包装用シートと一緒に、ナプキン本体の中央部上にそれぞれ折り返した状態で、包装用シートのこの折り返し部を互いに止着したことを特徴とする生理用ナプキンの包装構造。

【請求項5】 さらに、生理用ナプキンの一対の係止片が包装用シートと一緒に、包装用シートの折り返し部側またはその反対側に折り返されてなる請求項4に記載の生理用ナプキンの包装構造。

【請求項6】 透水性トップシート、不透水性パックシートおよび両シートの間に配設された吸収コアを備えると共にパックシート側には下着固定用の粘着剤層が設けられているナプキン本体と、このナプキン本体の長手方向の左右の側縁から突設されており、下着に巻回して止着するため一対の係止片とからなる生理用ナプキンを、包装用シートで包装する方法であって、

ナプキン本体の幅の2倍を超える幅を有する包装用シート帶を連続的に走行させ、

前記包装用シート帶上に、前記生理用ナプキンを、前記粘着剤層が包装用シート面に当接するように、かつ、ナプキンの長手方向が包装用シート帶の走行方向と一致するように、1個ずつ所定間隔で載置し、

前記一対の係止片を包装用シートと一緒に、生理用ナプキンのトップシート側に折り返し、

前記包装用シートの一対の側縁を重ね合わせて止着することを特徴とする生理用ナプキンの包装方法。

【請求項7】 透水性トップシート、不透水性パックシートおよび両シートの間に配設された吸収コアを備えると共にパックシート側には下着固定用の粘着剤層が設けられているナプキン本体と、このナプキン本体の長手方向の左右の側縁から突設されており、折り曲げられて下着に止着される一対の係止片とからなる生理用ナプキンを、包装用シートで包装する方法であって、

ナプキン本体の幅の1倍以上2倍以下の幅を有する包装用シート帶を連続的に走行させ、

20 前記包装用シート帶上に、前記生理用ナプキンを、前記粘着剤層が包装用シート面に当接するように、かつ、ナプキンの長手方向が包装用シート帶の走行方向と一致するように、1個ずつ所定間隔で載置し、

前記一対の係止片を包装用シートと一緒に、生理用ナプキンのトップシート側に折り返し、

前記包装用シートの折り返し部が対向するように、生理用ナプキンと包装用シートを幅方向中心線近傍で谷折りし、

対向した前記折り返し部同士を止着することを特徴とする生理用ナプキンの包装方法。

【請求項8】 透水性トップシート、不透水性パックシートおよび両シートの間に配設された吸収コアを備えると共にパックシート側には下着固定用の粘着剤層が設けられているナプキン本体と、このナプキン本体の長手方向の左右の側縁から突設されており、折り曲げられて下着に止着される一対の係止片とからなる生理用ナプキンを、包装用シートで包装する方法であって、

ナプキン本体の長さよりも大きい幅を有する包装用シート帶を連続的に走行させ、

40 前記包装用シート帶上に、前記生理用ナプキンを、前記粘着剤層が包装用シート面に当接するように、かつ、ナプキンの長手方向が包装用シート帶の走行方向と直交するように、1個ずつ所定間隔で載置し、

ナプキン本体の長手方向両端部を包装用シートと一緒に、ナプキン本体の中央部上にそれぞれ折り返し、

この包装用シートの折り返し部を互いに止着することを特徴とする生理用ナプキンの包装方法。

【請求項9】 さらに、生理用ナプキンの一対の係止片を包装用シートと一緒に、包装用シートの折り返し部側またはその反対側に位置するように折り返すものである

請求項8に記載の生理用ナプキンの包装方法。

【発明の詳細な説明】

【0001】

【発明の属する技術分野】本発明は、高速で包装することができる生理用ナプキンの包装構造および包装方法に関するものである。

【0002】

【従来の技術】最近、生理用ナプキンやおりもの用シート（以下、両者を代表して「生理用ナプキン」という）の中央の両側部に一対の係止片（ウイングやサイドラップ等と呼ばれている）を備えた生理用ナプキンが市販されている。例えば図1に示した生理用ナプキン1は、不織布や開孔プラスチックフィルム等で作られている透水性シート11、解織バルブと高吸水性ポリマー等で作られている吸収コア12およびプラスチックフィルムや不織布との積層シート等で作られている不透水性シート13が積層されて構成されており、このナプキン本体10の中央の両側部から透水性シートと不透水性シートを延在させることにより、一対の係止片14、14が左右に突出するように設けられている。またナプキン1のパックシート13側には、係止片用の粘着剤層15、15と、下着に付着してナプキンのずれを防止するためのズレ止め粘着剤層16が形成されている。このような係止片付きのナプキンは、着用者の下着の股下部分に左右の係止片14、14を下着の股下部分の非身体当接側に巻きつけて粘着剤層15と下着を止着すると共に、下着の身体当接側とナプキン1を、ズレ止め粘着剤層16で止着することにより、着用中のナプキンのズレを防止する効果を有するものである。

【0003】ところで、上記係止片やズレ止め粘着剤層は、ナプキンを高速生産した後の包装工程において問題の多い存在である。例えば市販されているナプキンの中には図12に示すように、係止片15、15用の粘着剤層に剥離紙（片面もしくは両面を剥離処理したフィルムや紙）17、17を貼り、ズレ止め粘着剤層16用の剥離紙18を包装用シート20側に固着しておき、係止片15、15をパックシート13側に折り返した状態でナプキンを長手方向に3つ折りにし、1個ずつ包装する、という手段が採用されているものがある、機械的に高速で行う場合にはなかなか難しい包装方法である。他の市販品の中には、図13（a）に示すように一対の係止片の粘着剤層15、15用の剥離紙17を1枚で共用させる構成のものもあるが、いずれにしても係止片付きナプキンの大半は係止片をパックシート側に折り返す構成となっている。これはナプキンの中央部付近の吸収コアが肉厚に形成されていることが多く、小さな薄肉の係止片を厚みの不均一なトップシート側に折り返すのは歩留が悪いためであると考えられる。

【0004】係止片をパックシート側に折り返してからズレ止め用粘着剤層を形成することも考えられるが、図

13（b）に示すように、粘着剤層を形成できる部分が斜線部に限られ、ズレ止めに最も有効なナプキン中央部に粘着剤層を設けることができないという欠点がある。

【0005】さらに最近では、使用者における剥離紙を捨てる手間を省き、かつ剥離紙のコストを削減することができるよう、包装用シートに剥離処理を行って包装する傾向となっており、こういった観点からも、係止片付き生理用ナプキンの包装構造に関する改善要望が高まっていた。

【0006】

【発明が解決しようとする課題】そこで本発明では、生理用ナプキンを高速で包装することのできる包装構造および包装方法を提供することを課題として掲げた。

【0007】

【課題を解決するための手段】請求項1に記載の発明は、透水性トップシート、不透水性パックシートおよび両シートの間に配設された吸収コアを備えたナプキン本体と、このナプキン本体のパックシート側に設けられた下着固定用の粘着剤層と、前記ナプキン本体の長手方向の左右の側縁から突設されると共に、下着に巻回して止着するための一対の係止片とからなる生理用ナプキンを、生理用ナプキンよりも大きい包装用シートで包装する生理用ナプキンの包装構造であって、前記生理用ナプキンの一対の係止片を、前記ナプキン本体のトップシート側に折り返し、前記包装用シートを、その包装用シートの一対の側縁がトップシートおよび係止片の上面に位置するように、前記ナプキン本体のパックシート側からトップシート側に折り返し、前記包装用シートの折り返し部同士を止着したところに要旨を有する。係止片がトップシート側に折り返されているので、使用者が係止片の存在を確認し易く、かつ装着し易い。また、パックシート側のズレ止め粘着剤層を位置の制限なく形成できるという利点がある。さらに、剥離処理済の包装用シートを用いれば、係止片の粘着剤層、パックシート側の粘着剤層のいずれにも、離型紙を貼る必要はない。従って、簡単に、良好な歩留で、コストの削減された包装工程を高速で行うことができる。

【0008】前記包装用シートの止着は、包装用シートの一対の側縁をトップシート上で重ね合わせ、この重なり合った部分を止着するものである構成（請求項2）、包装用シートの折り返し部が対向するように、生理用ナプキンと包装用シートを幅方向中心線近傍で谷折りし、対向した前記折り返し部同士を止着する構成（請求項3）のいずれを採用してもよい。いずれの構成でも、ナプキンを簡単にチューブ状に包装することができ、この後に、ナプキン長手方向に3つ折りまたは4つ折りすることにより、ナプキンの個別包装を行える。

【0009】請求項4に記載の発明は、前記包装用シート上に、前記生理用ナプキンを前記粘着剤層が包装用シート面に当接するように載置し、前記生理用ナプキンの

長手方向両端部を包装用シートと一緒に、ナプキン本体の中央部上にそれぞれ折り返した状態で、包装用シートのこの折り返し部を互いに止着したところに特徴を有する。この構成の採用によれば、生理用ナプキンの係止片の折り返しを考慮せずに長手方向に3つ折りにした状態でチューブ状に包装することができ、簡単にコンパクトな個別包装が完成する。また、パックシート側の粘着剤層を位置の制限なく形成することができる。さらに、剥離処理済の包装用シートを用いることにより、係止片の粘着剤層やパックシート側の粘着剤層に離型紙を貼る必要はない。

【0010】請求項5に記載の発明は、請求項4の包装構造において、生理用ナプキンの一対の係止片が包装用シートと一緒に、包装用シートの折り返し部側またはその反対側に折り返した構成の包装構造である。請求項4のチューブ状包装構造の両端縁をそのままヒートシール等で止着することもできるが、請求項5の構成を採用すれば、よりコンパクトな個別包装となる。この場合、係止片の折り曲げ方向は、3つ折りされたナプキンの上側あるいは下側いずれでもよい。

【0011】請求項6に記載の発明は、透水性トップシート、不透水性パックシートおよび両シートの間に配設された吸収コアを備えると共にパックシート側には下着固定用の粘着剤層が設けられているナプキン本体と、このナプキン本体の長手方向の左右の側縁から突設されており、下着に巻回して止着するため一対の係止片とからなる生理用ナプキンを、包装用シートで包装する方法であって、ナプキン本体の幅の2倍を超える幅を有する包装用シート帯を連続的に走行させ、前記包装用シート帯上に、前記生理用ナプキンを、前記粘着剤層が包装用シート面に当接するように、かつ、ナプキンの長手方向が包装用シート帯の走行方向と一致するように、1個ずつ所定間隔で載置し、前記一対の係止片を包装用シートと一緒に、生理用ナプキンのトップシート側に折り返し、前記包装用シートの一対の側縁を重ね合わせて止着するところに要旨を有する。この方法は、請求項2に記載の包装構造を製造する際の最適な方法であり、係止片を包装用シートと共に、トップシート側に折り返して、包装用シートの側縁を止着するだけで、ナプキンをチューブ状に包むことができる。

【0012】また請求項7に記載の発明は、透水性トップシート、不透水性パックシートおよび両シートの間に配設された吸収コアを備えると共にパックシート側には下着固定用の粘着剤層が設けられているナプキン本体と、このナプキン本体の長手方向の左右の側縁から突設されており、折り曲げられて下着に止着される一対の係止片とからなる生理用ナプキンを、包装用シートで包装する方法であって、ナプキン本体の幅の1倍以上2倍以下の幅を有する包装用シート帯を連続的に走行させ、前記包装用シート帯上に、前記生理用ナプキンを前記粘着

剤層が包装用シート面に当接するように、かつ、ナプキンの長手方向が包装用シート帯の走行方向と一致するように、1個ずつ所定間隔で載置し、前記一対の係止片を包装用シートと一緒に、生理用ナプキンのトップシート側に折り返し、前記包装用シートの折り返し部が対向するように、生理用ナプキンと包装用シートを幅方向中心線近傍で谷折りし、対向した前記折り返し部同士を止着する生理用ナプキンの包装方法である。この方法は、請求項3に記載の包装構造を製造する際の最適な方法であり、係止片を包装用シート毎トップシート側に折り返して、さらに包装用シートの折り返し部が対向するように、生理用ナプキンと包装用シートを幅方向中心線近傍で谷折りし、対向した前記折り返し部同士を止着する方法であり、一層コンパクトな包装を簡単に行うことができる。

【0013】請求項8に記載の発明は、請求項4に記載の包装構造を製造する際の最適な方法であり、ナプキン本体の長さよりも大きい幅を有する包装用シート帯を連続的に走行させ、前記包装用シート帯上に、前記生理用ナプキンを、前記粘着剤層が包装用シート面に当接するように、かつ、ナプキンの長手方向が包装用シート帯の走行方向と直交するように、1個ずつ所定間隔で載置し、ナプキン本体の長手方向両端部を包装用シートと一緒に、ナプキン本体の中央部上にそれぞれ折り返し、この包装用シートの折り返し部を互いに止着するところに要旨を有する。この構成の採用により、ナプキンの3つ折りとチューブ状包装が一工程で達成されるので高速連続包装が可能である。

【0014】請求項9に記載の発明は、請求項8に記載の包装方法において、請求項5に記載の包装構造を達成するため、さらに、生理用ナプキンの一対の係止片を包装用シートと一緒に、包装用シートの折り返し部側またはその反対側に位置するように折り返す工程を含む構成としたところに特徴がある。

【0015】  
【発明の実施の形態】本発明の請求項1に記載された包装構造（タイプ1）の最大のポイントは、ナプキン本体の両横に突設している左右の係止片と包装用シートをトップシート側に折り返し、チューブ状に包装した構成を採用したところにある。また、本発明の請求項4に記載された包装構造（タイプ2）の最大のポイントは、ナプキンの長手方向両端部を包装用シートと一緒に、ナプキンの中央部上に折り返して、包装用シートのこの折り返し部を止着してチューブ状に包装した構成を採用したところにある。

【0016】本発明で包装されるナプキンは、少なくとも、図1（a）および（b）に示したように、透水性トップシート11、不透水性パックシート13および両シートの間に配設された吸収コア12を備えたナプキン本体10と、このナプキン本体10のパックシート13側

に設けられた下着固定用の粘着剤層16と、前記ナブキン本体の長手方向の左右の側縁から突設されると共に、下着に巻回して止着するための一対の係止片14、14とからなるものである。係止片14、14にも、バックシート側に下着止着用の粘着剤層15、15が設けられている。

【0017】透水性トップシート11としては、肌ざわりの良い天然繊維または合成繊維からなる不織布、微孔が多数設けられたプラスチックフィルム、フォーム状等の透水性の素材が使用でき、不透水性バックシート13としてはプラスチックフィルムや、これと不織布の積層体等が使用できる。また吸収コア12としては、解織バルブ、セルロース繊維・フォーム、ビスコーススポンジ等の吸水材料や、孔吸水性ポリマー粉末、熱融着性繊維等、公知の材料が用いられる。係止片14は、トップシート11とバックシート13を突設させることにより形成することができ、また例えば撥水化処理された不織布や、バックシート用の素材を利用して別体の係止片を作り、ナブキン本体10に固着して形成してもよい。下着固定用（ズレ止め用）の粘着剤層16、係止片用粘着剤層15には、ホットメルト接着剤（SBS、SIS、SEBS、SEPS等のプロックポリマーを主体とするもの）や、その他アクリル系、ゴム系等の公知の粘着剤を用いることができる。

【0018】タイプ1の包装構造は、係止片をトップシート側に折り返したナブキンをチューブ状に包み込むものであり、包み方には2通りある。タイプ1のうちの第1の包装構造は、図2に示す通りである。まず、生理用ナブキンよりも大きく、かつ、ナブキン本体10の幅W<sub>1</sub>の2倍を超える幅W<sub>2</sub>を有する包装用シート2の上に、生理用ナブキン1をバックシート側が包装用シート2に当接するように載置する。このときバックシート側にはズレ止め用粘着剤層16が設けられているので、生理用ナブキン1は包装用シート2にしっかりと貼着され、包装中に位置ズレを起こすことはない。包装用シート2としては、厚さ5~50μm程度のポリプロピレン、ポリエチレン、ポリエステル、ポリビニルアルコール、セロハン等のフィルムや、不織布、紙（あるいはこれらの積層体）等の基材の少なくとも片面を、シリコーン樹脂、フッ素樹脂やその他公知の剥離処理剤で処理したものを使用することが好ましい。このような包装用シートを用いると、ズレ止め用粘着剤層16、係止片用粘着剤層のいずれにも、離型紙を貼ることなく、簡単に包装することができる。なお剥離処理を施さない包装用シートを用いる場合には、若干工程が煩雑になるが、前記粘着剤層16および係止片用粘着剤層15に剥離処理したフィルムや紙を貼り付けてよい。

【0019】包装用シート2にナブキン1を載置した後は、ナブキン本体10の側縁に添う折り曲げ線L<sub>1</sub>によって、図2（b）中、右側の係止片14aと包装用シート

ト2の右側部分21を、ナブキン1のトップシート11上に折り返す。次いで、（c）に示すように、左側の係止片14bを包装用シートの左側部分23と共に、折り曲げ線L<sub>2</sub>で（b）と同様に折り返す。このとき、包装用シート2の幅W<sub>1</sub>は、ナブキン本体10の幅W<sub>1</sub>の2倍を超えており、折り返した包装用シート21、23の側縁は、図3の断面図（図2（c）のIII-III線拡大断面図）全紙で示すように、重なり合うこととなる。この側縁の重なり部分、図2の（c）における斜線部を接着剤で接着したり、ヒートシールする等の手段で止着することによって、チューブ状包装が完成する。なお、吸収コアの厚みが厚いときは、これらの側縁が重なるように包装用シート2の幅W<sub>1</sub>を調整することが好ましい。

【0020】折り曲げ線L<sub>1</sub>、L<sub>2</sub>は、ナブキン本体10の側縁に接していても、またナブキン本体10上にあってもよい。折り曲げ線L<sub>1</sub>、L<sub>2</sub>がナブキン本体10上有るときは、ナブキン本体と係止片と一緒に折り曲げればよく、このときは包装用シートの幅がナブキン本体の幅の2倍以下であってもよい。しかし、包装工程の作業性を考慮すると、上記図2のように、折り曲げ線L<sub>1</sub>、L<sub>2</sub>がナブキン本体10の側縁近傍にあって、係止片のみを包装用シートと折り返す構成が最も好ましい。

【0021】あとは、ナブキン長手方向の端縁近傍をヒートシールや接着剤で接着することによって密封し、この密封の前、同時あるいは後に、ナブキンを長手方向に2つ折り、3つ折りあるいは4つ折りすれば、ナブキンの個別包装が完成する。長手方向に折った状態を維持するために、テープで止めてもよい。

【0022】一方、タイプ1の第2の包装構造は、図4に示す通りである。図4の（a）では、図2の（a）と同様にして、包装用シート2の上にナブキン1を載置する。図4においては、包装用シートの幅W<sub>1</sub>はナブキン本体10の幅W<sub>1</sub>の2倍以下であることが好ましい。図4の（b）においても図2の（b）と同様、右側の係止片14aと包装用シート2の右側部分21を、ナブキン1のトップシート11上に折り返す。次いで、図4の（c）に示すように、左側の係止片14bを包装用シートの左側部分23と共に、折り曲げ線L<sub>2</sub>で折り返す。

このとき、包装用シート2の幅W<sub>1</sub>は、ナブキン本体10の幅W<sub>1</sub>の2倍以下であるが、包装用シートの折り返し部21、23は、図2のときは異なり、W<sub>1</sub>だけ離間することとなる。このままでは、チューブ状包装とならないので、（d）に示すように、生理用ナブキン1と包装用シート2を幅方向中心線L<sub>3</sub>、近傍で谷折りして、包装用シートの折り返し部21、23を対向させ、この対向した折り返し部21、23同士を、例えば斜線部等の位置で、接着剤による接着またはヒートシールする等の手段で止着することによって、チューブ状包装とする。すなわち、図5の（a）に断面図（図4（c）の

V-V線拡大断面図)を示したように、包装用シートの折り返し部21、23は、W<sub>1</sub>だけ離間しているが、全体を谷折りすることにより、図5の(b)(図4(d)のX-X線拡大断面図)のように、折り返し部21、23が対向するので、黒矢印部分を止着すると、包装用シートの対向した折り返し部が内向きの合掌状に接合されたチューブ状包装となる。

【0023】本発明のタイプ1の包装方法の概略はこれまでの包装構造の説明で述べた通りであるが、以下、若干補足して説明する。タイプ1の第1の包装構造のための最適な包装方法は、図6に示すように、包装用シート帶24を連続的に走行させ、この包装用シート帶24上に、生理用ナプキン1を、その長手方向が走行方向と同じになるように、1個ずつ所定間隔で載置し、一対の係止片14、14を包装用シート帶24毎、生理用ナプキン1のトップシート11側に折り返し、包装用シート帶24の折り返された一対の側縁を重ね合わせて止着するものである。包装用シート帶24の折り返しは、上下どちらを先にしても、また同時にやってよい。側縁同士の止着を接着剤によって行うときは、折り返し部のいずれかまたは両方に接着剤を塗布する工程を、折り返し作業の前後または同時にやる。

【0024】側縁を接着してチューブ状の包装が完成した後は、隣接するナプキン1、1の間(ナプキン1の長手方向の端縁近傍であり図6中の符号25で示される部分)を、ヒートシールや接着剤で接着する。そして、個々のナプキンを上記斜線部の中央付近で切り離す工程、必要に応じてナプキンを長手方向に折り曲げる(2つ折り、3つ折り、4つ折り等)工程等を経て、ナプキンの個別包装が完成する。長手方向に折り曲げた状態を維持するためには、接着剤等で接着するか、テープ片で止めることが好ましい。図7には、ナプキンの個別包装体をナプキンの長手方向に3つ折りし、テープ片26で止めた状態を示した。

【0025】タイプ1の第2の包装構造の場合は、図4および図5で述べたように、ナプキンおよび包装用シート帶の谷折り工程と、包装用シート帶の折り返し部の止着工程が、上記図6で説明した方法に加わるだけである。

【0026】次に、本発明のタイプ2の包装構造について説明する。図8は、図1に示したものと同じ構造の生理用ナプキンを、トップシート11側から図示した平面図である。図1において同じ要素を指す符号は同一符号としている。この生理用ナプキンにおいて、一対の係止片14、14が位置する部分をナプキンの中心部1Bとして、ナプキンをその長手方向両端部との3つの領域に分ける。図中、ナプキン中心部1Bの上側を上端部1Aとし、中心部1Bより下側を下端部1Cとする。中心部と両端部の区別は厳密に行う必要はなく、中心部1Bが係止片を含んでいればよい。

【0027】タイプ2の包装構造は、図9に示す通りである。図8に示した生理用ナプキン1より大きい包装用シート3の上に、生理用ナプキン1をバックシート側が包装用シート3に当接するように載置する。この載置方向は、前記タイプ1と同じであり、包装用シートとして好ましい構成も前記した通りである。図9中、便宜上、包装用シートを、折り曲げ線L<sub>1</sub>より上(図では左)の部分(包装用シート上端部3A)、折り曲げ線L<sub>2</sub>と折り曲げ線L<sub>3</sub>の間の部分(包装用シート中心部3B)および折り曲げ線L<sub>4</sub>より下(図では右)の部分(包装用シート下端部3C)と分けて説明する。

【0028】図9(a)に示したように包装用シート3にナプキン1を載置した後は、生理用ナプキン1の上端部1Aと中心部1Bを区分けする線に沿った折り曲げ線L<sub>1</sub>によって、図9(b)のように、生理用ナプキン1の上端部1Aと、包装用シート上端部3Aとを一体に、生理用ナプキン1の中心部1Bの上に折り返して重ねる。次いで、(c)に示すように、生理用ナプキン1の下端部1Cと包装用シート下端部3Cと共に、折り曲げ線L<sub>2</sub>で折り返し、(b)において折り返した包装用シートの上端部3Aの上に重ねる。このように折り重ねることで、生理用ナプキン1は、3つ折り状態となっている。

【0029】そして、折り返された包装用シートの上端部3A(折り返し部に相当)と、下端部3C(同じく折り返し部に相当)とを、接着剤で接着したり、ヒートシールする等の手段で止着することによって、チューブ状包装が完成する。2つの折り返し部は、折り曲げ線L<sub>1</sub>およびL<sub>2</sub>の位置設定によって、図9に示したようにほぼ全面積にわたって重なり合うような構成から、包装用シート3の両端縁近傍のみが重なり合うような構成まで適宜変更可能である。図9に示したような3つ折り状態が最もナプキンをコンパクトに折り畳めるため、好ましい構成である。なお、折り曲げ線L<sub>1</sub>、L<sub>2</sub>は、ナプキンの係止片14を横切らないように設けることが好ましい。

【0030】チューブ状包装が完成した後は、図9(c)の3つ折り状態のまま、包装用シートの両側縁31、32の近傍をヒートシールや接着剤で接着することによって密封して個包装としてもよいが、さらにコンパクトに折り畳むこともできる。図10(a)には、図9(c)と同じ状態のチューブ状包装品を示している。ここで、折り曲げ線L<sub>1</sub>と包装用シートの右端縁31との間を3つ折り包装用シート右端部3Dとし、折り曲げ線L<sub>2</sub>と折り曲げ線L<sub>3</sub>との間を3つ折り包装用シート中心部3Eとし、折り曲げ線L<sub>4</sub>と包装用シートの左端縁32との間を3つ折り包装用シート左端部3Fとする。なお、図10(a)に示すように、折り曲げ線L<sub>1</sub>と折り曲げ線L<sub>2</sub>は、左右の係止片14rと14lそれぞれの基端部近傍(図2におけるナプキン本体10より外

側) とし、係止片と3つ折りされた包装用シートのみを折り返す構成を採用することが好ましい。折り曲げ線しと折り曲げ線L<sub>1</sub>をナップキン本体上に設けても、ナップキンは既に3つ折りされていて嵩高くなっているので、折り曲げにくくからである。

【0031】図10(b)のように、左側の係止片141と、3つ折り包装用シート左端部3Fとを一体に、3つ折り包装用シート中心部3Eの上に折り返して重ねる。次いで、(c)に示すように、右側の係止片141と、3つ折り包装用シート左端部3Fとを一体に、折り曲げ線しと折り返し、(b)において折り返した3つ折り包装用シート左端部3Dの上に重ねる。このように折り重ねることで、3つ折りされたチューブ状包装体がさらに3つ折りされることとなる。

【0032】そして、3つ折り包装用シートの右端縁31を、その下側に位置する包装用シート左端部3Fにヒートシールや別体のテープで止める等して止着するか、3つ折りされてさらに3つ折りされた包装体の上端縁34および下端縁35を、ヒートシールする等の手段で止着することによって、非常にコンパクト化された包装体が完成する。3つ折り包装用シートの両端部3D、3Fは、図10のように折り重ねられた生理用ナップキンの上面に位置するように折り返すのではなく、ナップキンの下面側(図の裏側方向)に向けて折り返すこともできる。

【0033】本発明のタイプ2の包装方法の概略はこれまでの包装構造の説明で述べた通りである。図6に示したタイプ1の包装方法とは、生理用ナップキン1の長手方向が包装用シート帶の走行方向と直交するように載置する点が異なるだけで、大きな違いはない。すなわち、タイプ2の包装方法では、図11に示すように、連続走行する包装用シート帶35上に、生理用ナップキン1の長手方向が包装用シート帶35の走行方向と直交するように、ナップキンを1個ずつ所定間隔で載置する。このように載置した後は、図6の係止片と包装用シートとの折り返し工程にかえて、図9(a)～(c)に示した包装用シートと生理用ナップキンとの3つ折り工程を連続的に行う以外は、図6に準じて包装構造を完成させればよい。

【0034】

【発明の効果】本発明のタイプ1の包装構造(請求項1～3)は、一对の係止片付き生理用ナップキンを包装する際に、係止片をトップシート側に折り返しているので、使用者が係止片の存在を確認し易く、かつ装着し易いという効果を有する。また、タイプ2の包装構造(請求項4～5)は、生理用ナップキンを長手方向に3つ折りにした状態でチューブ状に包装することができ、簡単にコンパクトな個別包装品を得ることができる。いずれの包装構造においても、バックシート側のズレ止め粘着剤層を、係止片の存在に影響されず、位置の制限なく形成でき、かつ包装できるという利点がある。さらに、剥離処

理済の包装用シートを用いれば、係止片の粘着剤層、バックシート側の粘着剤層のいずれにも、離型紙を貼る必要はない。従って本発明の包装方法(請求項6～8)は、簡単に、良好な歩留で、高速に連続包装が行えるので、コスト削減可能である。

【図面の簡単な説明】

【図1】(a)、(b)は、本発明の包装構造が適用される係止片付き生理用ナップキンの平面図である。

【図2】(a)～(c)は、本発明のタイプ1の第1の包装構造の斜視説明図である。

【図3】図2の(c)のIII-III線拡大断面図である。

【図4】(a)～(d)は、本発明のタイプ1の第2の包装構造の斜視説明図である。

【図5】(a)は、図4の(c)のV-V線拡大断面図、(b)は図4の(d)のX-X線拡大断面図である。

【図6】本発明のタイプ1の包装方法を示す平面図である。

【図7】本発明の包装方法で得られた個別包装体の斜視説明図である。

【図8】本発明の包装構造が適用される係止片付き生理用ナップキンの平面図である。

【図9】(a)～(c)は、本発明のタイプ2の包装構造の斜視説明図である。

【図10】(a)～(c)は、図8の包装構造をさらに小さくした包装構造の斜視説明図である。

【図11】本発明のタイプ2の包装方法を示す平面図である。

【図12】従来の包装構造を示す説明図である。

【図13】(a)～(b)は、従来の生理用ナップキンの平面図である。

【符号の説明】

1 生理用ナップキン

2 包装用シート

3 包装用シート

10 ナップキン本体

11 トップシート

12 吸収コア

13 バックシート

14 係止片

15 係止片用粘着剤層

16 下着固定用粘着剤層

21、23 包装用シートの折り返し部

1A 生理用ナップキン長手方向上端部

1B 生理用ナップキン長手方向中心部

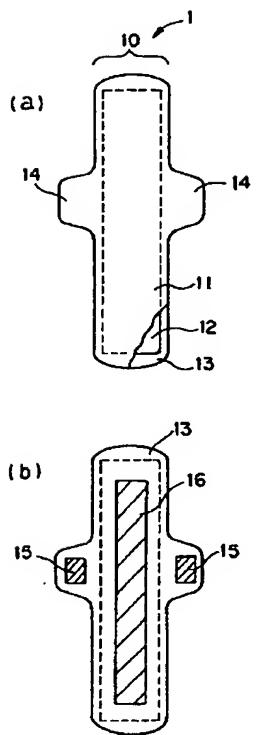
1C 生理用ナップキン長手方向下端部

3A 包装用シート上端部

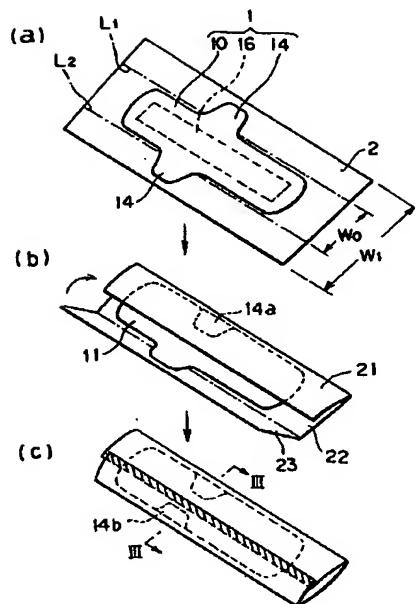
3B 包装用シート中心部

3C 包装用シート下端部

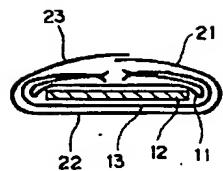
【図1】



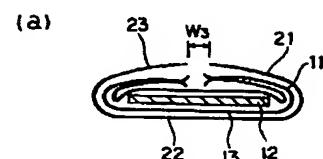
【図2】



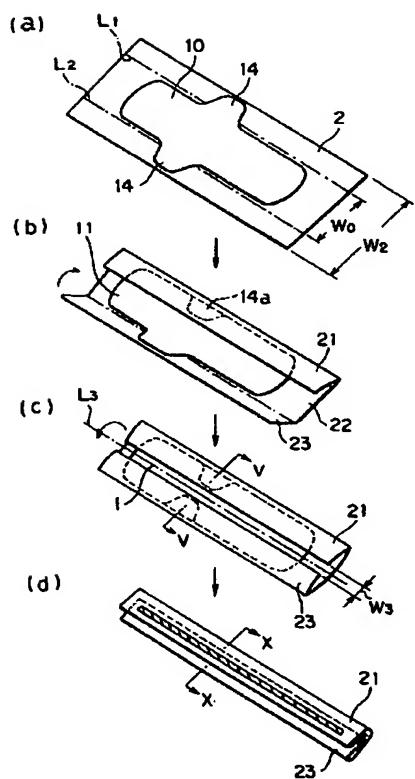
【図3】



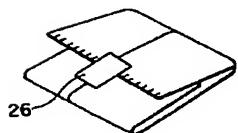
【図5】



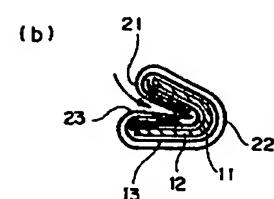
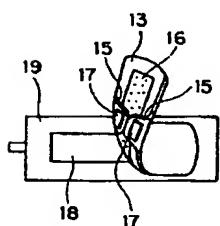
【図4】



【図7】

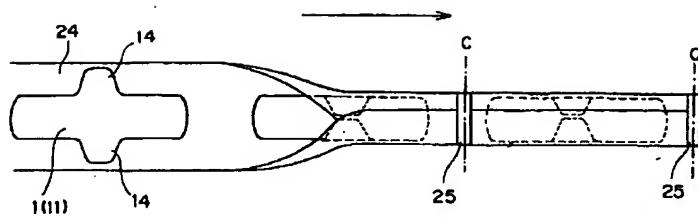


【図12】

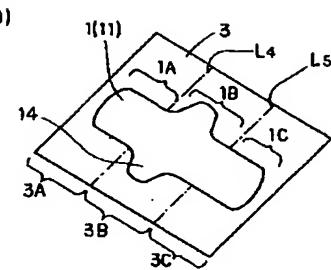


【図8】

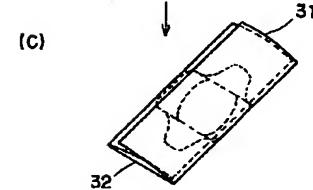
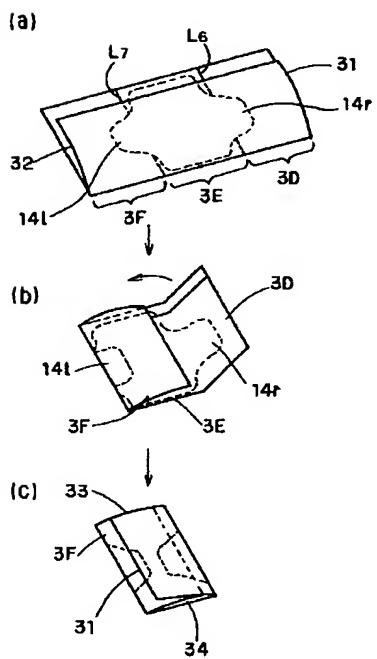
【図6】



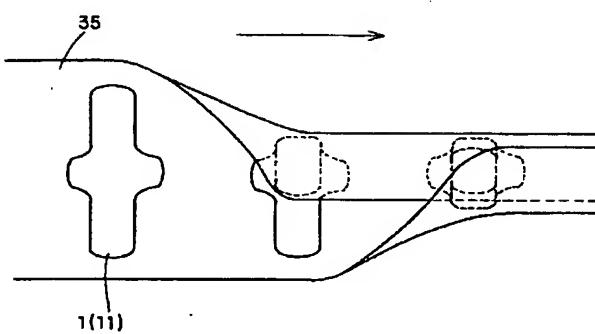
【図9】



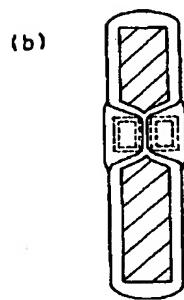
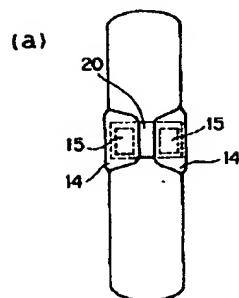
【図10】



【図11】



【図13】



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**A bibliography**

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[FI]  
A61F 13/18 370  
340  
[Request for Examination] Un-asking.  
[The number of claims] 9  
[Mode of Application] OL  
[Number of Pages] 10  
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(33) [Country Declaring Priority] Japan (JP)  
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Epitome

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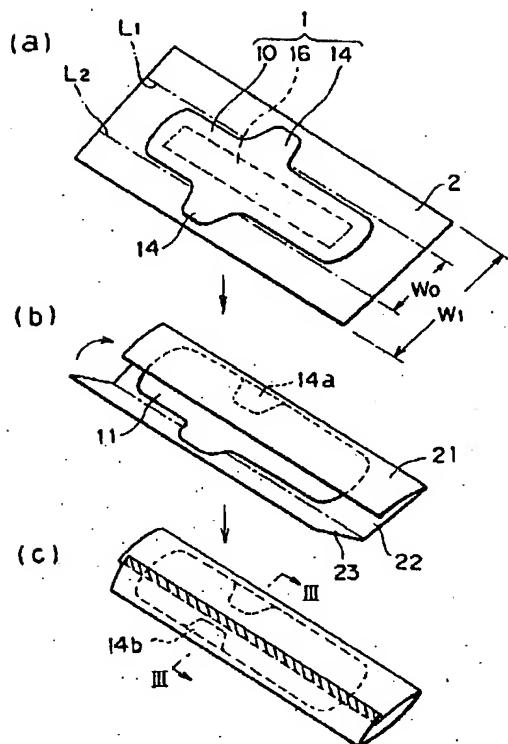
(57) [Abstract]

[Technical problem] The package structure and the package method of packing a sanitary napkin at high speed are offered.

[Means for Solution] A main part of a napkin equipped with an absorption core arranged between a permeable top sheet, an impermeability backseat, and both sheets, While protruding from a binder layer for underwear immobilization prepared in a backseat side of this main part of a napkin, and a side edge of right and left of a longitudinal direction of said main part of a napkin A sanitary napkin which consists of a stop piece of a pair for winding and attaching firmly to underwear It is the package structure of a sanitary napkin packed with a sheet for a package. The stop piece 14 of a pair of a sanitary napkin 1 To the top sheet 11 side of the main part 10 of a napkin, a clinch and the sheet 2 for a package so that a side edge of a pair of the sheet for a package may be located in the upper surface of a top sheet and a stop piece It is the package structure constituted so that a clinch, the clinch section 21 of a sheet for a package, and 23 comrades might be attached firmly to a top sheet side from a backseat side of a main part of a napkin.

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CLAIMS

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[Claim(s)]

[Claim 1] A main part of a napkin equipped with an absorption core arranged between a permeable top sheet, an impermeability backsheet, and both sheets A binder layer for underwear immobilization prepared in a backsheet side of this main part of a napkin A stop piece of a pair for winding and attaching firmly to underwear, while protruding from a side edge of right and left of a longitudinal direction of said main part of a napkin It is the package structure of a sanitary napkin equipped with

the above, and it is characterized by attaching firmly the clinch sections of a clinch and said sheet for a package to a top sheet side from a backseat side of said main part of a napkin so that a side edge of a pair of the sheet for a package may be located [ piece / of a pair of said sanitary napkin / stop ] in the upper surface of a top sheet and a stop piece in a clinch and said sheet for a package at a top sheet side

[Claim 2] Package structure of a sanitary napkin according to claim 1 which is what attaches superposition and these overlapping portions firmly for a side edge of a pair of said sheet for a package.

[Claim 3] Package structure of a sanitary napkin according to claim 1 which is what carries out the valley chip box of a sanitary napkin and the sheet for a package near the crosswise center line, and attaches said clinch sections which countered firmly so that the clinch section of said sheet for a package may counter.

[Claim 4] A main part of a napkin equipped with an absorption core arranged between a permeable top sheet, an impermeability backseat, and both sheets A binder layer for underwear immobilization prepared in a backseat side of this main part of a napkin A stop piece of a pair for winding and attaching firmly to underwear, while protruding from a side edge of right and left of a longitudinal direction of said main part of a napkin It is the package structure of a sanitary napkin equipped with the above, on said sheet for a package, said sanitary napkin is laid so that said binder layer may contact a sheet side for a package, and where longitudinal direction both ends of said sanitary napkin are turned up on a center section of the main part of a napkin to a sheet for a package, and one, respectively, it is characterized by attaching this clinch section of a sheet for a package firmly mutually.

[Claim 5] Furthermore, package structure of a sanitary napkin according to claim 4 where a sheet for a package and one come to turn up a stop piece of a pair of a sanitary napkin in a clinch section side of a sheet for a package, or its opposite side.

[Claim 6] It is the method of packing a sanitary napkin with a sheet for a package by which it is characterized by providing the following. Make it run a sheet band for a package which has width of face exceeding the twice of width of face of a main part of a napkin continuously, and on said sheet band for a package, said sanitary napkin, so that said binder layer may contact at a sheet side for a package And so that a longitudinal direction of a napkin may be in agreement with the transit direction of a sheet band for a package A package method of a sanitary napkin characterized by laying one piece at a time at intervals of predetermined, laying a side edge of a pair of a clinch and said sheet for a package on top of a sheet for a package, and one, and attaching a stop piece of said pair firmly to them at a top sheet side of a sanitary napkin A main part of a napkin with which a binder layer for underwear immobilization is prepared in a backseat side while having an absorption core arranged between a permeable top sheet, an impermeability backseat, and both sheets It is the stop piece of a pair in order to protrude from a side edge of right and left of a longitudinal direction of this main part of a napkin and to wind and

attach firmly to underwear.

[Claim 7] It is the method of packing a sanitary napkin with a sheet for a package by which it is characterized by providing the following. Make it run a sheet band for a package which has width of face of 1 or more time 2 double less or equal of width of face of a main part of a napkin continuously, and on said sheet band for a package, said sanitary napkin so that said binder layer may contact at a sheet side for a package And so that a longitudinal direction of a napkin may be in agreement with the transit direction of a sheet band for a package Lay one piece at a time at intervals of predetermined, and a stop piece of said pair so that the clinch section of a clinch and said sheet for a package may counter a sheet for a package, and one at a top sheet side of a sanitary napkin A package method of a sanitary napkin characterized by carrying out the valley chip box of a sanitary napkin and the sheet for a package near the crosswise center line, and attaching said clinch sections which countered firmly A main part of a napkin with which a binder layer for underwear immobilization is prepared in a backseat side while having an absorption core arranged between a permeable top sheet, an impermeability backseat, and both sheets A stop piece of a pair which protrudes from a side edge of right and left of a longitudinal direction of this main part of a napkin, is bent, and is attached firmly to underwear

[Claim 8] It is the method of packing a sanitary napkin with a sheet for a package by which it is characterized by providing the following. Make it run a sheet band for a package which has larger width of face than the length of a main part of a napkin continuously, and on said sheet band for a package, said sanitary napkin so that said binder layer may contact at a sheet side for a package And so that the transit direction of a sheet band for a package and a longitudinal direction of a napkin may cross at right angles A package method of a sanitary napkin characterized by laying one piece at a time at intervals of predetermined, and attaching firmly mutually the clinch section of a clinch and this sheet for a package to a sheet for a package, and one for longitudinal direction both ends of a main part of a napkin on a center section of the main part of a napkin, respectively A main part of a napkin with which a binder layer for underwear immobilization is prepared in a backseat side while having an absorption core arranged between a permeable top sheet, an impermeability backseat, and both sheets A stop piece of a pair which protrudes from a side edge of right and left of a longitudinal direction of this main part of a napkin, is bent, and is attached firmly to underwear

[Claim 9] Furthermore, a package method of a sanitary napkin according to claim 8 which is what turns up a stop piece of a pair of a sanitary napkin so that it may be located in a clinch section side of a sheet for a package, or its opposite side at a sheet for a package, and one.

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**DETAILED DESCRIPTION**

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**[Detailed Description of the Invention]****[0001]**

[The technical field to which invention belongs] This invention relates to the package structure and the package method of the sanitary napkin which can be packed at high speed.

**[0002]**

[Description of the Prior Art] recently, a sanitary napkin, and a vaginal discharge — the sanitary napkin which equipped the both-sides section of the center of the \*\* sheet (henceforth a "sanitary napkin" representing both) with the stop piece (called the wing, the side flap, etc.) of a pair is marketed. For example, the sanitary napkin 1 shown in drawing 1 The laminating of the impermeability sheet 13 currently made from the absorption core 12 and plastic film which are made from the permeable sheet 11 and \*\*\*\* pulp which are made from a nonwoven fabric, puncturing plastic film, etc., high absorptivity polymer, etc., a laminating sheet with a nonwoven fabric, etc. is carried out, and it is constituted. By making a permeable sheet and an impermeability sheet extend from the both-sides section of the center of this main part 10 of a napkin, it is prepared so that the stop pieces 14 and 14 of a pair may project right and left. Moreover, it shifts for adhering to underwear and preventing a gap of a napkin from the binder layers 15 and 15 for stop pieces, and the stop binder layer 16 is formed in the backseat 13 side of a napkin 1. Such a napkin with a stop piece has the effect of preventing gap of the napkin under wear, by shifting and attaching the body contact side of underwear, and a napkin 1 firmly in the stop binder layer 16 while it twists the stop pieces 14 and 14 of right and left into the length-from-the-crotch-to-the-cuff portion of a wearer's underwear around the non-body contact side of the length-from-the-crotch-to-the-cuff portion of underwear and attaches the binder layer 15 and underwear firmly.

[0003] By the way, the above-mentioned stop piece and a gap stop binder layer are existence with many problems in the packaging process after carrying out high-speed production of the napkin. For example, as shown in the napkin marketed at drawing 12 , releasing papers (the film and paper which carried out exfoliation

processing of one side or both sides) 17 and 17 are stuck on the stop piece 15 and the binder layer for 15. Shift and the releasing paper 18 for stop binder layer 16 is fixed to the sheet 20 side for a package. When [ that there are some as which a means to make a napkin into a longitudinal direction at 3 chip boxes, and to pack it one piece at a time where the stop pieces 15 and 15 are turned up to a backseat 13 side is adopted ] carrying out mechanically at high speed, it is the very much difficult package method. Although the thing of a configuration of making the binder layer 15 of the stop piece of a pair and the releasing paper 17 for 15 share by one sheet is also in other commercial items as shown in drawing 13 (a), most napkins with a stop piece have anyway composition which turns up a stop piece to a backseat side. The absorption core near the center section of the napkin is formed thickly in many cases, and this is considered to turn up the stop piece of small thin meat to the uneven top sheet side of thickness, because the yield is bad.

[0004] Although shifting after turning up a stop piece to a backseat side, and forming the binder layer for stops is also considered, as shown in drawing 13 (b), the portion which can form a binder layer is restricted to the slash section, and shifts, and there is a defect that a binder layer cannot be prepared in the napkin center section most effective in a stop.

[0005] Furthermore, it is the orientation which packs by performing exfoliation processing on the sheet for a package, and the improvement requests about the package structure of a sanitary napkin with a stop piece were mounting also from such viewpoints so that the time and effort which throws away the releasing paper in a user might be saved recently and the cost of a releasing paper could be reduced.

[0006]

[Problem(s) to be Solved by the Invention] So, in this invention, it hung up offering the package structure and the package method of packing a sanitary napkin at high speed as a technical problem.

[0007]

[Means for Solving the Problem] A main part of a napkin equipped with an absorption core by which invention according to claim 1 was arranged between a permeable top sheet, an impermeability backseat, and both sheets, While protruding from a binder layer for underwear immobilization prepared in a backseat side of this main part of a napkin, and a side edge of right and left of a longitudinal direction of said main part of a napkin A sanitary napkin which consists of a stop piece of a pair for winding and attaching firmly to underwear It is the package structure of a sanitary napkin packed with a larger sheet for a package than a sanitary napkin. To a top sheet side of said main part of a napkin, a stop piece of a pair of said sanitary napkin so that a side edge of a pair of the sheet for a package may be located in the upper surface of a top sheet and a stop piece in a clinch and said sheet for a package It has a summary at a place which attached firmly the clinch sections of a clinch and said sheet for a package to a top sheet side from a backseat side of said main part of a napkin. Since a stop piece is turned up at a top sheet side, a user tends to check existence

of a stop piece, and it is easy to equip. Moreover, a backseat side shifts and there is an advantage that a stop binder layer can be formed without a limit of a location. Furthermore, if a sheet [ finishing / exfoliation processing ] for a package is used, it is necessary to stick a release paper on neither a binder layer of a stop piece, nor a binder layer by the side of a backseat. Therefore, a packaging process by which cost was reduced can be easily performed by good yield at high speed.

[0008] Firm attachment of said sheet for a package may adopt any of a configuration (claim 3) of carrying out the valley chip box of a sanitary napkin and the sheet for a package near the crosswise center line, and attaching said clinch sections which countered firmly so that the clinch section of a sheet for a configuration (claim 2) and a package which is what attaches superposition and these overlapping portions firmly on a top sheet may counter a side edge of a pair of a sheet for a package. Any configuration can pack a napkin in the shape of a tube easily, and can perform an individual package of a napkin to a napkin longitudinal direction 3 chip boxes or by carrying out a quarto next.

[0009] On said sheet for a package, invention according to claim 4 lays said sanitary napkin so that said binder layer may contact a sheet side for a package, is in a condition which turned up longitudinal direction both ends of said sanitary napkin on a center section of the main part of a napkin to a sheet for a package, and one, respectively, and has the feature at a place which attached this clinch section of a sheet for a package firmly mutually. According to adoption of this configuration, it can pack in the shape of a tube in the condition of having made it a longitudinal direction at 3 chip boxes, without taking into consideration a clinch of a stop piece of a sanitary napkin, and a compact individual package is completed simply.

Moreover, it can form without a limit of a binder layer by the side of a backseat of a location. Furthermore, it is necessary to stick a release paper neither on a binder layer of a stop piece, nor a binder layer by the side of a backseat by using a sheet [ finishing / exfoliation processing ] for a package.

[0010] Invention according to claim 5 is the package structure of a configuration of that a stop piece of a pair of a sanitary napkin turned up to a sheet for a package and one in a clinch section side of a sheet for a package or its opposite side in package structure of claim 4. Although a both-ends edge of tube-like package structure of claim 4 can also be attached firmly with heat sealing etc. as it is, if a configuration of claim 5 is adopted, it will become a compacter individual package, in this case, a napkin top which folded the three bending directions of a stop piece and was carried out or the bottom — any are sufficient.

[0011] A main part of a napkin with which a binder layer for underwear immobilization is prepared in a backseat side while invention according to claim 6 is equipped with an absorption core arranged between a permeable top sheet, an impermeability backseat, and both sheets, A sanitary napkin which consists of a stop piece of a pair in order to protrude from a side edge of right and left of a longitudinal direction of this main part of a napkin and to wind and attach firmly to underwear

Are the method of packing with a sheet for a package, make it run a sheet band for a package which has width of face exceeding the twice of width of face of a main part of a napkin continuously, and on said sheet band for a package, said sanitary napkin so that said binder layer may contact at a sheet side for a package And so that a longitudinal direction of a napkin may be in agreement with the transit direction of a sheet band for a package It lays one piece at a time at intervals of predetermined, and has a summary at a place which lays a side edge of a pair of a clinch and said sheet for a package on top of a sheet for a package, and one, and attaches a stop piece of said pair firmly to them at a top sheet side of a sanitary napkin. This method is optimal method at the time of manufacturing package structure according to claim 2, it turns up a stop piece to a top sheet side with a sheet for a package, only attaches a side edge of a sheet for a package firmly, and can wrap a napkin in the shape of a tube.

[0012] Moreover, a main part of a napkin with which a binder layer for underwear immobilization is prepared in a backseat side while invention according to claim 7 is equipped with an absorption core arranged between a permeable top sheet, an impermeability backseat, and both sheets, A sanitary napkin which consists of a stop piece of a pair which protrudes from a side edge of right and left of a longitudinal direction of this main part of a napkin, is bent, and is attached firmly to underwear Are the method of packing with a sheet for a package, and it is made to run a sheet band for a package which has width of face of 1 or more time 2 double less or equal of width of face of a main part of a napkin continuously. On said sheet band for a package, said sanitary napkin so that said binder layer may contact in a sheet side for a package And so that a longitudinal direction of a napkin may be in agreement with the transit direction of a sheet band for a package Lay one piece at a time at intervals of predetermined, and a stop piece of said pair so that the clinch section of a clinch and said sheet for a package may counter a sheet for a package, and one at a top sheet side of a sanitary napkin It is the package method of a sanitary napkin which carries out the valley chip box of a sanitary napkin and the sheet for a package near the crosswise center line, and attaches said clinch sections which countered firmly. This method is optimal method at the time of manufacturing package structure according to claim 3, is the method of carrying out the valley chip box of a sanitary napkin and the sheet for a package near the crosswise center line, and attaching said clinch sections which countered firmly, and can perform a still compacter package easily so that a stop piece may be turned up to a top sheet side the whole sheet for a package and the clinch section of a sheet for a package may counter further.

[0013] Invention according to claim 8 is the optimal method at the time of manufacturing package structure according to claim 4. Make it run a sheet band for a package which has larger width of face than the length of a main part of a napkin continuously, and on said sheet band for a package, said sanitary napkin so that said binder layer may contact at a sheet side for a package And so that the transit

direction of a sheet band for a package and a longitudinal direction of a napkin may cross at right angles. It lays one piece at a time at intervals of predetermined, and has a summary at a place which attaches firmly mutually the clinch section of a clinch and this sheet for a package to a sheet for a package, and one for longitudinal direction both ends of a main part of a napkin on a center section of the main part of a napkin, respectively. Since 3 chip boxes of a napkin and a tube-like package are attained at one production process by adoption of this configuration, a high-speed continuation package is possible.

[0014] In a package method according to claim 8, invention according to claim 9 has the feature in a place considered as a configuration including a production process which turns up a stop piece of a pair of a sanitary napkin further so that it may be located in a clinch section side of a sheet for a package, or its opposite side at a sheet for a package, and one, in order to attain package structure according to claim 5.

[0015]

[Embodiment of the Invention] The greatest point of the package structure (Type 1) indicated by claim 1 of this invention is in the place which adopted the configuration which packed the stop piece and the sheet for a package of the right and left which protrude beside [ both ] the main part of a napkin a clinch and in the shape of a tube to the top sheet side. Moreover, the greatest point of the package structure (Type 2) indicated by claim 4 of this invention turns up the longitudinal direction both ends of a napkin on the center section of the napkin to the sheet for a package, and one, and is in the place which adopted the configuration which attached this clinch section of the sheet for a package firmly, and was packed in the shape of a tube.

[0016] At least, as shown in drawing 1 (a) and (b), the napkin packed by this invention The main part 10 of a napkin equipped with the absorption core 12 arranged between the permeable top sheet 11, the impermeability backseat 13, and both sheets, While protruding from the binder layer 16 for underwear immobilization prepared in the backseat 13 side of this main part 10 of a napkin, and the side edge of right and left of the longitudinal direction of said main part of a napkin, it consists of stop pieces 14 and 14 of the pair for winding and attaching firmly to underwear. The binder layers 15 and 15 for underwear firm attachment are formed in the backseat side also at the stop pieces 14 and 14.

[0017] Permeable materials, such as the shape of the nonwoven fabric which consists of the good natural fiber or good synthetic fiber of the touch as a permeable top sheet 11, the plastic film with which many fine holes were prepared, and form, can be used, and plastic film, the layered product of this and a nonwoven fabric, etc. can be used as an impermeability backseat 13. Moreover, as an absorption core 12, well-known materials, such as water absorption materials, such as \*\*\*\* pulp, cellulose fiber and form, and viscose sponge, and hole absorptivity polymer powder, heat welding nature fiber, are used. The stop piece 14 may make the stop piece of another object using the nonwoven fabric by which could form by

making the top sheet 11 and a backseat 13 protrude, and water-repellent treatment was carried out, for example, and the material for backseats, and may fix and form in the main part 10 of a napkin. the binder layer 16 for underwear immobilization (shifting for stops), and the binder layer 15 for stop pieces -- hot melt adhesive (what makes a subject block polymer, such as SBS, SIS, SEBS, and SEPS) -- in addition, well-known binders, such as acrylic and a rubber system, can be used.

[0018] As for the package structure of Type 1, the napkin which turned up the stop piece to the top sheet side is wrapped in in the shape of a tube, and there are two kinds in how to wrap. The 1st package structure of Types 1 is as being shown in drawing 2 . First, it is larger than a sanitary napkin, and is the width of face W0 of the main part 10 of a napkin. Width of face W1 exceeding twice On the sheet 2 for a package which it has, a sanitary napkin 1 is laid so that a backseat side may contact the sheet 2 for a package. Since it shifts to a backseat side at this time and the binder layer 16 for stops is formed, a sanitary napkin 1 is firmly stuck on the sheet 2 for a package, and does not cause location gap during a package. It is desirable to use what processed at least one side of base materials, such as films, such as polypropylene with a thickness of about 5-50 micrometers, polyethylene, polyester, polyvinyl alcohol, and cellophane, and a nonwoven fabric, paper (or these layered products), by silicone resin, the fluororesin, or the exfoliation processing agent well-known in addition to this as a sheet 2 for a package. It can pack easily, without shifting and sticking a release paper on both the binder layer 16 for stops, and the binder layer for stop pieces, if such a sheet for a package is used. In addition, although a production process becomes complicated a little in using the sheet for a package which does not perform exfoliation processing, the film and paper which carried out exfoliation processing may be stuck on said binder layer 16 and the binder layer 15 for stop pieces.

[0019] It is the bend line L1 which accompanies the side edge of the main part 10 of a napkin after laying a napkin 1 in the sheet 2 for a package. A part for the right flank 21 of right-hand side stop piece 14a and the sheet 2 for a package is turned up on the top sheet 11 of a napkin 1 among drawing 2 (b). Subsequently, as shown in (c), it is a bend line L2 in a part for the left flank 23 of the sheet for a package about left-hand side stop piece 14b. It turns up like (b). At this time, it is the width of face W1 of the sheet 2 for a package. Width of face W0 of the main part 10 of a napkin Since it is over twice, the side edges of the turned-up sheets 21 and 23 for a package will overlap, as cross section (III-III of drawing 2 (c) line expanded sectional view) whole space of a newspaper of drawing 3 shows. A tube-like package is completed by pasting up with adhesives or attaching firmly the lap portion of this side edge, and the slash section in (c) of drawing 2 with the means of heat sealing. In addition, it is the width of face W1 of the sheet 2 for a package so that these side edges may lap, when the thickness of an absorption core is thick. Adjusting is desirable.

[0020] A bend line L1 and L2 It may be in contact with the side edge of the main

part 10 of a napkin, or you may be on the main part 10 of a napkin. A bend line L1 and L2 When it is on the main part 10 of a napkin, the width of face of the sheet for a package may be 2 double less or equal of the width of face of the main part of a napkin at this time that what is necessary is just to bend the main part of a napkin, and a stop piece together. However, when the workability of a packaging process is taken into consideration, it is a bend line L1 and L2 like above-mentioned drawing 2 . The configuration which is near the side edge of the main part 10 of a napkin, and turns up only a stop piece with the sheet for a package is the most desirable.

[0021] The rest is sealed by pasting up near the edge of a napkin longitudinal direction with heat sealing or adhesives, and before this seal, if a napkin is folded in two longitudinal directions, and three are folded or a quarto is carried out to coincidence or the back, an individual package of a napkin will complete it. In order to maintain the condition of having broken into the longitudinal direction, you may stop on a tape.

[0022] On the other hand, the 2nd package structure of Type 1 is as being shown in drawing 4 . In (a) of drawing 4 , a napkin 1 is laid on the sheet 2 for a package like (a) of drawing 2 . It sets to drawing 4 and is the width of face W2 of the sheet for a package. Width of face W0 of the main part 10 of a napkin It is desirable that it is 2 double less or equal. Also in (b) of drawing 4 , a part for the right flank 21 of right-hand side stop piece 14a and the sheet 2 for a package is turned up on the top sheet 11 of a napkin 1 like (b) of drawing 2 . Subsequently, as shown in (c) of drawing 4 , it is a bend line L2 in a part for the left flank 23 of the sheet for a package about left-hand side stop piece 14b. It turns up. this time — width of face W2 of the sheet 2 for a package Width of face W0 of the main part 10 of a napkin since it is 2 double less or equal — the clinch sections 21 and 23 of the sheet for a package — the time of drawing 2 — differing — W3 only — it will estrange. The way things stand, since it does not become a tube-like package, as shown in (d) It is the crosswise center line L3 about a sanitary napkin 1 and the sheet 2 for a package. Carry out a valley chip box in near, and the clinch sections 21 and 23 of the sheet for a package are made to counter. This clinch section 21 that countered, and 23 comrades in for example, locations, such as the slash section By attaching firmly with the means of pasting up or heat sealing by adhesives, it considers as a tube-like package. that is, the cross section (V-V line expanded sectional view of drawing 4 (c)) was shown in (a) of drawing 5 — as — the clinch sections 21 and 23 of the sheet for a package — W3 only, although estranged Since the clinch sections 21 and 23 counter by carrying out the valley chip box of the whole as shown in (b) and (X-X-ray expanded sectional view of drawing 4 (d)) of drawing 5 , if a black arrow head portion is attached firmly, the clinch section which the sheet for a package countered will serve as a tube-like package joined in the shape of [ of the inner sense ] joining the palms together.

[0023] Although the outline of the package method of Type 1 of this invention is as explanation of old package structure having described, it supplements a little

hereafter and it is explained. The optimal package method for the 1st package structure of Type 1 As shown in drawing 6 , make it run the sheet band 24 for a package continuously, and a sanitary napkin 1 on this sheet band 24 for a package so that that longitudinal direction may become the same as the transit direction It lays one piece at a time at intervals of predetermined, and the side edge of the pair by which the clinch and the sheet band 24 for a package were turned up in the stop pieces 14 and 14 of a pair at the every sheet band 24 for package and top sheet 11 side of a sanitary napkin 1 is piled up and attached firmly. the clinch of the sheet band 24 for a package — the upper and lower sides — whichever may be carried out first or you may carry out to coincidence. When attaching side edges firmly with adhesives, the production process which applies adhesives to both clinch both [ either or .] is performed to clinch activity order or coincidence.

[0024] After pasting up a side edge and completing a tube-like package, between the adjoining napkins 1 and 1 (portion which is near the edge of the longitudinal direction of a napkin 1, and is shown with the sign 25 in drawing 6 ) is pasted up with heat sealing or adhesives. And an individual package of a napkin is completed through the production process which separates each napkin near the center of the above-mentioned slash section, the production processes (folding two and folding three quarto etc.) which bend a napkin to a longitudinal direction if needed. In order to maintain the condition of having bent to the longitudinal direction, it is desirable to paste up with adhesives etc. or to stop by the tape piece. The individual package object of a napkin was folded and made into three longitudinal directions of a napkin, and the condition of having stopped by the tape piece 26 was shown in drawing 7.

[0025] As drawing 4 and drawing 5 described in the case of the 2nd package structure of Type 1, the valley chip box production process of a napkin and the sheet band for a package and the firm attachment production process of the clinch section of the sheet band for a package only join the method explained by above-mentioned drawing 6 .

[0026] Next, the package structure of Type 2 of this invention is explained. Drawing 8 is the plan which illustrated the sanitary napkin of the same structure as what was shown in drawing 1 from the top sheet 11 side. The sign which points out the same element in drawing 1 is taken as the same sign. In this sanitary napkin, a napkin is divided into three fields with those longitudinal direction both ends for the portion in which the stop pieces 14 and 14 of a pair are located as core 1B of a napkin. The napkin core 1B bottom is set to upper limit section 1A among drawing, and it is made into lower limit section 1C below core 1B. It is not necessary to perform distinction of a core and both ends strictly, and core 1B should just contain the stop piece.

[0027] The package structure of Type 2 is as being shown in drawing 9 . On the larger sheet 3 for a package than the sanitary napkin 1 shown in drawing 8 , a sanitary napkin 1 is laid so that a backseat side may contact the sheet 3 for a package. This installation direction is the same as said type 1, and is as having also

described above the configuration desirable as a sheet for a package. It is a bend line L4 about the sheet for a package for convenience among drawing 9. The upper (drawing left) portion (sheet upper limit section 3 for package A), and bend line L4 Bend line L5 The portion (sheet core 3 for package B) and bend line L5 of a between It divides with a lower (drawing right) portion (sheet lower limit section 3C for a package), and explains.

[0028] As shown in drawing 9 (a), after laying a napkin 1 in the sheet 3 for a package, upper limit section 1A of a sanitary napkin 1 and sheet upper limit section 3A for a package are turned up and put on one on core 1B of a sanitary napkin 1 like drawing 9 (b) by the bend line L4 which met the line which classifies upper limit section 1A and core 1B of a sanitary napkin 1. Subsequently, as shown in (c), it is a bend line L5 in lower limit section 1C of a sanitary napkin 1, and sheet lower limit section 3C for a package. It piles up on upper limit section 3A of a clinch and the sheet for a package turned up in (b). Thus, the sanitary napkin 1 is in 3 chip-box condition by turning up.

[0029] And a tube-like package is completed by pasting up with adhesives or attaching firmly upper limit section 3A (equivalent to the clinch section) of the turned-up sheet for a package, and lower limit section 3C (equivalent to the clinch section similarly) with the means of heat sealing. The two clinch sections are bend lines L4. And L5 It can change suitably from a configuration which overlap over a whole surface product by the location mostly as shown in drawing 9 to a configuration which is overlapped only near the both-ends edge of the sheet 3 for a package. Since 3 chip-box condition as shown in drawing 9 can fold up a napkin in a compact most, it is a desirable configuration. In addition, a bend line L4 and L5 It is desirable to prepare so that the stop piece 14 of a napkin may not be crossed.

[0030] Although it seals by pasting up near the edges on both sides 31 and 32 of the sheet for a package with heat sealing or adhesives with 3 chip-box condition of drawing 9 (c) and is good also as a unit protection article after a tube-like package is completed; it is also further foldable in a compact. The tube-like package article of the same condition as drawing 9 (c) is shown in drawing 10 (a). here — bend line L6 between the right edges 31 of the sheet for a package — sheet right edge 3D for 3 chip-box package — carrying out — bend line L6 Bend line L7 between — sheet core 3 for 3 chip-box package E — carrying out — bend line L6 between the left end edges 32 of the sheet for a package — the object for 3 chip-box package — it is referred to as sheet left end section 3F. In addition, as shown in drawing 10 (a), it is bend line L6. Bend line L7 It is desirable to adopt the configuration which turns up only the sheet for a package which carried out 14l. near [ each ] the end face section (outside the main part 10 of a napkin in drawing 2) with stop piece 14r on either side, broke with three stop pieces and was carried out. bend line L6 Bend line L7 even if it prepares on the main part of a napkin, a napkin is folded three and is already carried out — having — \*\*\*\* — \*\* — it is because it is high, so it is hard to bend.

[0031] Like drawing 10 (b), 14l. of left-hand side stop pieces and 3 \*\* chip box package wearing sheet left end section 3F are turned up and put on one on sheet core 3E for 3 chip-box package. Subsequently, as shown in (c), it is right-hand side stop piece 14r and 3 \*\* chip box package wearing sheet left end section 3F to one Bend line L6 It piles up on a clinch and sheet left end section 3D for 3 chip-box package turned up in (b). Thus, three more tube-like package objects which folded three by turning up and were carried out by it will break, and will be carried out.

[0032] And [ whether it makes it package wearing sheet left end section 3F located in the bottom to stop on the tape of heat sealing or another object etc., and the right edge 31 of the sheet for 3 chip-box package is attached firmly to them, and ] The package object miniaturized very much is completed by attaching firmly the upper limit edge 34 and the lower limit edge 35 of a package object which folded three, were carried out, folded three more and were carried out with the means of heat sealing. Both-ends 3D of the sheet for 3 chip-box package and 3F cannot be turned up so that it may be located in the upper surface of the sanitary napkin folded up like drawing 10 , but they can also be turned up towards the inferior-surface-of-tongue side (the direction of a background of drawing) of a napkin.

[0033] The outline of the package method of Type 2 of this invention is as explanation of old package structure having described. The point laid so that the transit direction of the sheet band for a package and the longitudinal direction of a sanitary napkin 1 may cross at right angles only differs from the package method of Type 1 shown in drawing 6 , and there is no big difference. That is, by the package method of Type 2, as shown in drawing 11 , it lays one napkin at a time at intervals of predetermined on the sheet band 35 for a package which carries out continuation transit, so that the transit direction of the sheet band 35 for a package and the longitudinal direction of a sanitary napkin 1 may cross at right angles. Thus, what is necessary is to change to the clinch production process of the stop piece of drawing 6 , and the sheet for a package, and just to complete package structure according to drawing 6 except performing continuously 3 chip box production processes of the sheet for a package and sanitary napkin which were shown in drawing 9 (a) – (c), after laying.

[0034]

[Effect of the Invention] Since the package structure (claims 1-3) of Type 1 of this invention is turning up the stop piece to the top sheet side in case it packs the sanitary napkin with a stop piece of a pair, a user tends to check existence of a stop piece, and it has the effect of being easy to equip. Moreover, the package structure (claims 4-5) of Type 2 can pack a sanitary napkin in the shape of a tube in the condition of having made it the longitudinal direction at 3 chip boxes, and can obtain a compact individual package article easily. Also in which package structure, a backseat side shifts, it is not influenced by existence of a stop piece, a stop binder layer can be formed without a limit of a location, and there is an advantage that it can pack. Furthermore, if the sheet [ finishing / exfoliation processing ] for a

package is used, it is necessary to stick a release paper on neither the binder layer of a stop piece, nor the binder layer by the side of a backseat. Therefore, simply, the package method (claims 6-8) of this invention is a good yield, and since it can perform a continuation package at a high speed, cost reduction is possible for it.

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[Translation done.]

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**DESCRIPTION OF DRAWINGS**

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**[Brief Description of the Drawings]**

[Drawing 1] (a) and (b) are the plans of the sanitary napkin with a stop piece with which the package structure of this invention is applied.

[Drawing 2] (a) - (c) is strabism explanatory drawing of the 1st package structure of Type 1 of this invention.

[Drawing 3] III-III of (c) of drawing 2 It is a line expanded sectional view.

[Drawing 4] (a) - (d) is strabism explanatory drawing of the 2nd package structure of Type 1 of this invention.

[Drawing 5] (a) is the V-V line expanded sectional view of (c) of drawing 4, and (b) is X-X-ray expanded sectional view of (d) of drawing 4.

[Drawing 6] It is the plan showing the package method of Type 1 of this invention.

[Drawing 7] It is strabism explanatory drawing of the individual package object acquired by the package method of this invention.

[Drawing 8] It is the plan of the sanitary napkin with a stop piece with which the package structure of this invention is applied.

[Drawing 9] (a) - (c) is strabism explanatory drawing of the package structure of Type 2 of this invention.

[Drawing 10] (a) - (c) is strabism explanatory drawing of the package structure which made package structure of drawing 8 still smaller.

[Drawing 11] It is the plan showing the package method of Type 2 of this invention.

[Drawing 12] It is explanatory drawing showing the conventional package structure.

[Drawing 13] (a) - (b) is the plan of the conventional sanitary napkin.

## [Description of Notations]

- 1 Sanitary Napkin
- 2 Sheet for Package
- 3 Sheet for Package
- 10 Main Part of Napkin
- 11 Top Sheet
- 12 Absorption Core
- 13 Backseat
- 14 Stop Piece
- 15 Binder Layer for Stop Pieces
- 16 Binder Layer for Underwear Immobilization
- 21 23 The clinch section of the sheet for a package
- 1A Sanitary napkin longitudinal direction upper limit section
- 1B Sanitary napkin longitudinal direction core
- 1C Sanitary napkin longitudinal direction lower limit section
- 3A The sheet upper limit section for a package
- 3B The sheet core for a package
- 3C The sheet lower limit section for a package

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[Translation done.]

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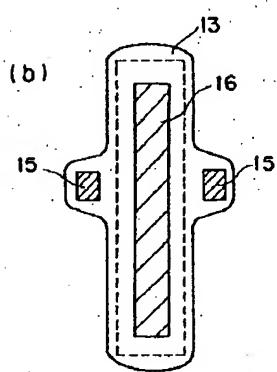
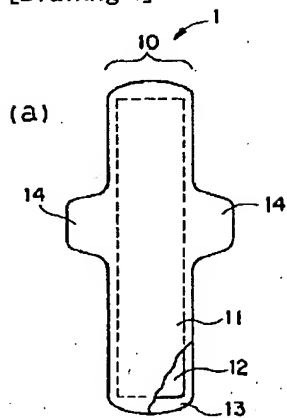
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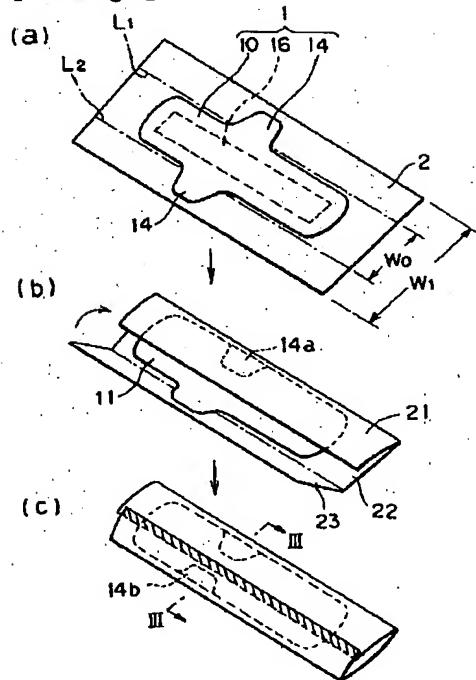
DRAWINGS

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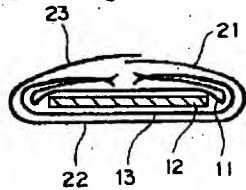
## [Drawing 1]



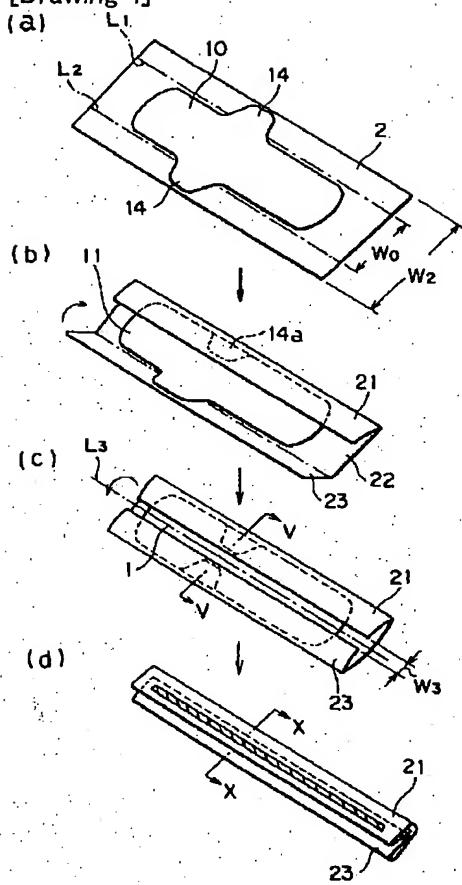
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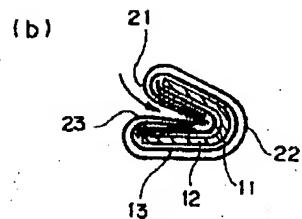
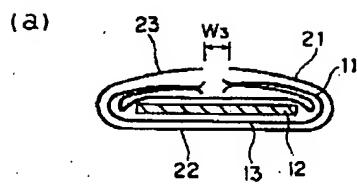
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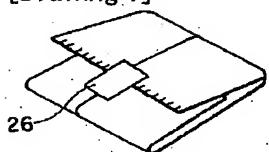
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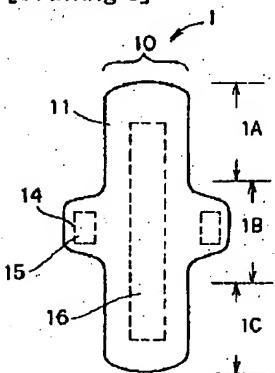
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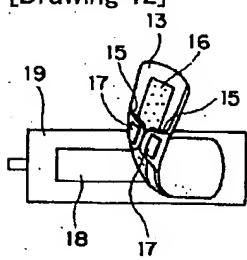
[Drawing 7]



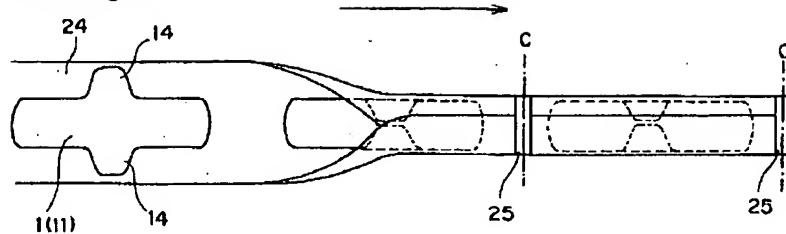
[Drawing 8]



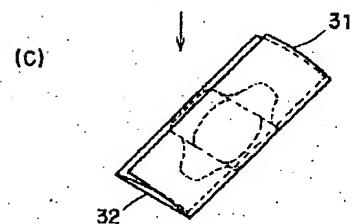
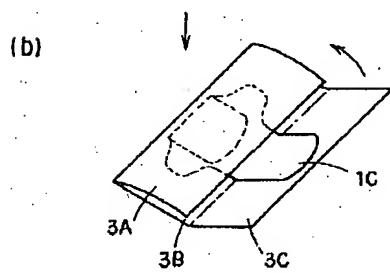
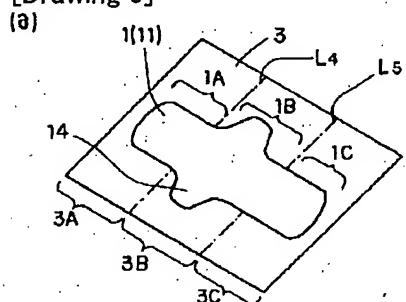
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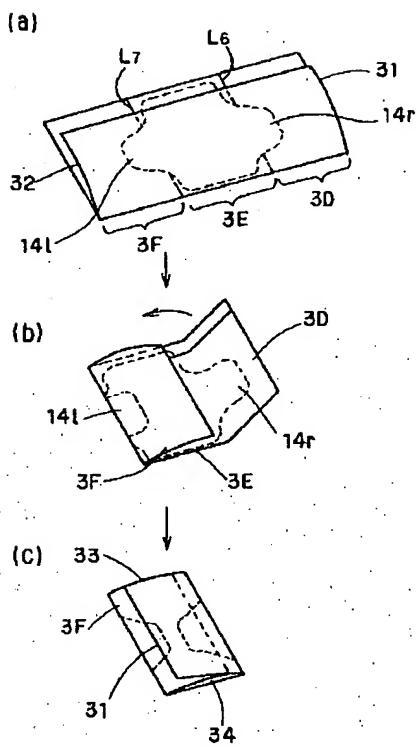
[Drawing 6]



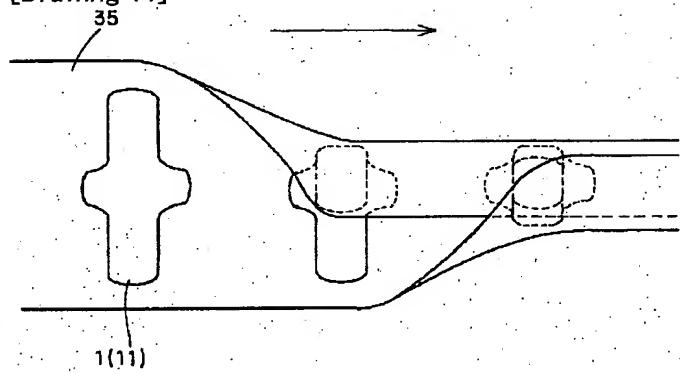
[Drawing 9]



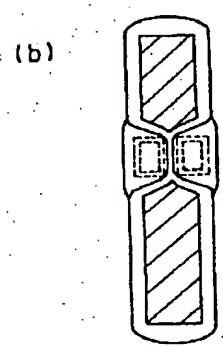
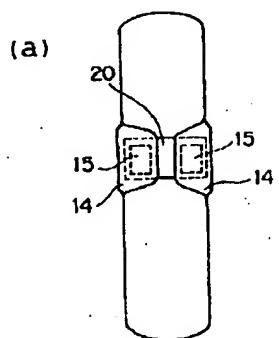
[Drawing 10]



[Drawing 11]



[Drawing 13]



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[Translation done.]